

ABSTRACT OF THE DISCLOSURE

A process improves the quality of recombined curd, milled cheese curds and/or cheese components by reducing voids and apparent lines of fracture in the recombined cheese, without the necessity of adding such volumes or types of materials into the product as would affect other aspects of quality such as taste. The process comprises combining segments of curds or cheese with a selected quantity of transglutaminase that coats surfaces of curd or cheese segments to be combined. The curds may be milled cheese curds, and may be taken directly off-line in the manufacturing process (with or without cooling), and then combined with the transglutaminase, then fed into a form.

The segments with the transglutaminase are stored at a temperature (and pressure) and for a time sufficient to fuse, bond, lessen, repair or reverse the apparent lines and voids between interfaces where the segments are in contact with each other. The process may allow the segments of cheese to react with the transglutaminase for at least 5 minutes in a temperature range of between 32 to 125°F. The transglutaminase has been found to be useful in various forms, including, but not limited to solid and liquid application media.

As a solid, the transglutaminase may be provided in any active form (e.g., solid compound, salt, complex, encapsulate, mixture or blend and may be used in a pure or diluted state. Because of the activity level of the transglutaminase, it is preferred to provide the active ingredient in a diluted form. In a solid format, the transglutamines in an active form may be diluted with any biotolerable solid (e.g., non-toxic filler), particularly those with no taste or flavor, or those with desired taste and flavor. Among the types of fillers that would be tolerable or desirable would be salts (e.g., common NaCl), carbonates (e.g., CaCO₃, MgCO₃, etc.), inorganic oxides (e.g., silica), microcellulose fibers, pulp fiber, etc.